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BOOK REVIEWS

Erlebtes und Erkanntes. By WILHELM WUNDT. Stuttgart, A. Kröner, 1920. Pp. xii., 399.

What a man has made of his life, Wundt says, is measured by the ratio of *Erkanntes* to *Erlebtes*, of the lessons learned from experience to the data of experience itself. The measure, taken in the rather special sense in which Wundt intends it, gives him a sufficiently large vital quotient; few of us would think of using a box on the ear, received in the first year of schooling, to illustrate the Law of the Continuity of Consciousness! Throughout the book, indeed, *Erkanntes* is far more in evidence than *Erlebtes*, and again and again the reader is diverted from some simple item of narrative to a technical disquisition which contains all the subtlety of Wundt's mature thought and shows all the intricacy of his mature style. Since we are familiar with the contents of Wundt's principal works, I shall pass over these scientific homilies and shall confine myself in the present notice to matters of autobiographical fact and to certain questions of genesis.

First of all, however, I must remark that whatever else Wundt learned in the course of his long life he had not learned fully to know himself. He tells us in the Preface that the cast of his mind was political, and its leading motive a desire to further the interests of state and society. There is, no doubt, a grain of truth in this characterization; Wundt was neither the typical man of science nor the typical philosopher. In the main, however, the statement derives from a very natural illusion. Wundt's boyhood was a time of marked political disturbance; he had worked off the superfluous energy of his early manhood in various social and political undertakings; and the closing years of his life were spent in the shadow of the Great War. The end thus harked back to the beginning, and the Karlsruhe episode took on in memory an undue importance. The illusion is, surely, natural enough,¹ and furnishes us with some thirty pages of interesting and instructive reading. It is, none the less, an illusion, and one to which Wundt himself elsewhere supplies the needed corrective. Every man, he declares, really lives a number of lives, which are more or less closely connected, but which run their separate courses to the end. His own political bent belongs, without question, to a partial and subordinate life whose brief periods of dominance are separated by long stretches of scholarly absorption.

In a recent paper I gave a scanty outline of Wundt's life. This outline can now be filled out, and at one point, where I made an unlucky guess, corrected. At the time when Wundt's schooldays began his parents were living at Heidelberg. Here he passed two years in the *Volksschule*, and thereafter, until he entered the *Gymnasium*, was taught privately by his father's *Vikarius*. Wundt was a solitary and imaginative boy, averse from games and from school-work, much given to day-dreaming and, later on, to miscellaneous reading of poetry and historical novels. He was the fourth child in the family; but two children had died so early that he had no remembrance of

¹ Readers of the Leibniz-brochure of 1917 will not think it fanciful if I suggest, as a secondary source of Wundt's belief, the parallel between himself and Leibniz.

them, and his surviving brother, eight years older than himself, was away at school, a member of his aunt's household in Heidelberg. He thus passed his early years "ohne Geschwister und ohne Mitschüler."

His tutor, to whom he was so deeply attached that he followed him for a year to Münzesheim, seems to have been anything but strict and to have taught him but little. Wundt was able, nevertheless, to enter the *Gymnasium* at the neighboring town of Bruchsal, where he spent an unhappy year,—whence, indeed, he ran away, only to be escorted back by his mother. The misfit was so plain, however, that his parents determined to remove him to Heidelberg. Here (and not, as I had guessed, at Mannheim) he attended the *Gymnasium* from his fourteenth year until the time came to exchange school for university. The year of entry was overcast by the death of his father; the later years passed happily. Wundt was taken in hand by his brother, who saw to it that he worked with some steadiness; he made friends, and was pledged to membership in a student *Korps*; following the example of his uncle Arnold, a professor in Tübingen, he devoted himself enthusiastically to the study of the anatomy of the brain; he read widely, and on long walks with his fellows discussed what he had read; in a word, he lived the normal, companionable life of his age and environment.

Required, now, to make choice of a career, Wundt after some hesitation decided upon medicine. He had no special call; but he wanted above all things to get away from home; he had been interested, as we have seen, in brain anatomy; and as a beginning student of medicine he could, with some show of reason, migrate to Tübingen for his uncle's instruction. The year 1851-2 saw him, accordingly, a student at that university. In the summer of 1851 he returned to Heidelberg, with increased knowledge of brain anatomy but with very little beside, save the conviction that nature had not meant him to be a physician. He was forced afresh to a decision, and his choice fell on the new experimental science of physiology. His first Heidelberg year was spent upon preparatory studies in mathematics, physics and chemistry. Bunsen's lectures had well-nigh seduced him into preferring chemistry to physiology; but he remained true to his considered choice, and compromised only in so far that his first scientific publication—duly listed in the JOURNAL'S bibliography under the year 1853—dealt with a problem in physiological chemistry. During the second year he studied clinical pathology and pathological anatomy. A prize-essay, in preparation for which he performed, at home and with the help of his mother, a series of vivisectional experiments on the rabbit, brought him a word of commendation from Johannes Müller. The third year—there must have been a third medical year, if later dates are to square—seems to have been devoted to the special medical subjects; I cannot make out that Wundt marks it off, definitely from the year preceding. At the end of this third year, as it would appear, he took his *Staatsexamen*, and came out first in all three divisions: internal medicine, surgery and obstetrics.

In spite of his success in examination, Wundt was still not disposed to attempt a medical practice. He accepted a semester's position as substitute assistant in Hasse's Clinic, and became so keenly interested in his work there that he again had thoughts of deserting physiology, this time for pathological anatomy. In addition to his regular duties, he prepared an experimental thesis for the doctorate of medicine at the University: it was published in 1856. At the expiry of his term of service he determined, with a little money in hand, to go on a

physiological pilgrimage to Berlin, and there to utilize a final semester in work with Johannes Müller and du Bois-Reymond. He entered the University of Berlin in the spring of 1856; began at once a couple of experimental investigations, the results of one of which led to publication; and came back to Heidelberg, his student-days over, in the late summer of the same year.

Wundt's next step was to offer himself as *Privatdozent* in physiology to the medical faculty of his own university. There was very little formality in the matter: the doctorate thesis was accepted as *Habilitationsschrift*, and examinations were dispensed with. He straightway advertised a six-hour course in physiology, with demonstrations and experiments, which attracted an audience of four. But he had undertaken too much. A series of hemorrhages cut short the lectures and the beginnings of research; physicians and family despaired of his life; and it was a full year before his health was thoroughly restored. His experiences and reflections during this illness had a permanent effect upon his philosophy and his idea of the relation of philosophy to science.² When he was able to take up his work again, apparently early in 1857, he busied himself with an experimental study of muscular contraction, in continuation of an *Arbeit* suggested by du Bois and begun in Berlin. The book, Wundt's first book, came out in 1858,—dedicated to du Bois, published by Vieweg, "mit vorzüglichen Abbildungen der Apparate und Methoden ausgestattet;" outwardly as inwardly a joy to the heart of its young author. But books have their fates: and this book was destined, since it did not please du Bois, to issue stillborn from the press. At first, Wundt says, he was distressed; then, resigned. Later he began to see the humor of the situation, and later still he forgot the whole affair. Now, in his old age, he reviews his early work, and finds it, on the whole, very good.

When Helmholtz was called to Heidelberg in 1858, Wundt offered himself as assistant, and was accepted. Neither Helmholtz nor Wundt had any very precise idea of what the duties of an assistant might be; Helmholtz vaguely suggested microscopy, which Wundt did not affect. The Government presently cut the difficulty by requiring all students of medicine to take a semester's work in the physiological laboratory; and Wundt accordingly found his mornings, from 8 to 12, given over to elementary instruction and indifferent students. He held out for some years, but finally resigned the position (the story of his dismissal by Helmholtz is pure myth) to devote himself to the writing of his *Physiology and Medical Physics*. As to his relations to Helmholtz, it is hardly an exaggeration to say that they were non-existent. Helmholtz was as silent in fact as the great Moltke is in legend, and Wundt, the assistant, did not venture to ask his professor questions; and though Helmholtz unbent in society, he unbent for social relaxation, and not for the discussion of scientific problems. It was unfortunate, too, that both Helmholtz and Wundt were now occupied with the same subject, sense-perception. Wundt in two passages comments a little regretfully on this coincidence; and there can be no doubt that the community of interest, taken together with a radical difference of perspective, held the two men apart. So we have a few anecdotes, and we have a sort of apology for Helmholtz' liking of foreigners, and that is all.

² The incident is discussed by W. Wirth, in the memorial article in *Arch. f. d. g. Psych.*, xl. I regret that I cannot say more of it in this place.

The biographies state that Wundt gave up his assistantship in 1864 and was promoted to *extraordinarius* in the same year. Unless I have somewhere missed a sentence, the date is not mentioned by Wundt himself. He tells us that the *Beiträge* were inspired, primarily by E. H. Weber and by his own experiences of cutaneous anaesthesia in Hasse's Clinic, secondarily and more remotely by Johannes Müller. The notion of creative synthesis came to him, in connection with the problem of visual space perception, in the spring of 1858. The genesis of the *Physiologische Psychologie* is less clear, and Wundt's account of the book itself is, I venture to think, somewhat colored by his later views,—though this coloring, since it shows us what Wundt would have planned if he were writing the work anew, is of importance in its own right. The one thing we see clearly is that Wundt, during the time of his connection with Helmholtz, was steadily reading the standard psychologies of the day. He got up at 5 o'clock in winter to study Herbart's *Psychologie als Wissenschaft*; and he familiarized himself with Lotze, Forstlge, George, Volkman, and the rest, as well as with the older psychology of Wolff and Kant. If this wider interest appears, in the light of Wundt's whole career, as a natural consequence of the original interest in sense-perception, I must still believe, as I suggested in the paper already referred to, that it reflects also a direct reaction against the anti-psychologism of Helmholtz. Otherwise we should have heard more of psychological difficulties, and more of the actual motivation of the *Physiologische Psychologie*. The book came out, as we know, in 1873-4, and its successive revisions are described by Wundt as "ein beträchtlicher Teil meiner Lebensarbeit."

We have, I take it, a like admixture of *Wahrheit und Dichtung* in the account of the genesis of the *Völkerspyschologie*. We need not question the statement that, about the year 1860, Wundt conceived the idea of adding social psychology as a sort of superstructure to experimental psychology; the preface to the *Vorlesungen* stands as witness. But Wundt in 1920 had not gone over this work as carefully as he had restudied the *Muskelbewegung*. He forgets that the theory of thought is completed in the first volume, before social psychology makes its appearance; he forgets his express repudiation of Lazarus and Steinthal; he forgets his insistence that the book is a book of individual psychology, and that he introduces the facts of social psychology only to round out this individual psychology, especially on the side of morals and religion. The fact remains, of course,—there is *Wahrheit* amid the *Dichtung*,—that the second volume of the *Vorlesungen* is largely made up of material which was later psychologized in the *Völkerspyschologie*, and that it contains the germs of later theories. Wundt's first lectures on social psychology were, however, delivered at Zurich in the summer of 1875, after the publication of the *Physiologische Psychologie*; and the *Vorlesungen* probably drew less upon special studies than upon the contents of his Heidelberg lectures on anthropology. The new course seems also to have owed something to Wundt's recent occupation with Aristotle.

During his whole long stay at Heidelberg Wundt was busied about his titular subject of physiology. But he also became variously interested in philosophy, and as early as 1866 published his first philosophical book, *Die physikalischen Axiome*. Towards the last this interest must have been recognized as dominant by his colleagues; Kuno Fischer told him later that he had intended to recommend him to a philosophical chair in Heidelberg. The call came, in fact, from Zurich: at first, apparently after the publication of the first half of the *Physio-*

logische Psychologie, as a tentative enquiry, and a year later in definitive form,—a call to the chair of inductive philosophy vacated by Lange. Wundt was not fated, however, to remain long abroad. In May, 1875, he was offered a chair of philosophy at Leipzig. The faculty had first called Fischer, who was unable to accept. Then the idea arose, partly in view of the great age of Drobisch, of dividing Ahrens' professorship, and of securing at the cost of a single philosopher of repute two young men, the one of whom should represent the philological, the other the scientific aspect of academic philosophy. The choice fell upon Heinze and Wundt, whose youth and insignificance inspired a satirical journalist of the day to transform their names into the familiar Hinz and Kunz. One wonders how long that journalist lived! The moving spirit in the whole affair was, curiously, the astro-physicist Zöllner, a man known to psychologists both by his 'illusion' and by his unfortunate association with Slade. Zöllner had a strong leaning toward philosophy, concerned himself actively with the filling of the chairs, and was allowed by an apathetic faculty to pick his men. The Herbartians, Drobisch and Strümpell, had nothing whatever to do with Wundt's appointment,—and another historical anecdote turns out to be mere invention.

Wundt's arrival at Leipzig brings us near the end of his story. He was privileged there to enjoy the friendship of E. H. Weber, the father of experimental psychology, who had still three years to live, and of Fechner, the founder of psychophysics, who lived till 1887. From the first he aspired to organize and direct a laboratory. He started with a few rooms in the old *Konviktgebäude*; in 1892 he obtained more adequate quarters in the *Trierianum*; and in 1897 he moved back to the main building of the university, and took possession of the new-built Institute. In 1913 an extra story was added to the *Paulinum*, over a great part of the Institute proper, and was assigned to *Völkerpsychologie*. Other overhead construction was planned, with a view to a special section of psychophysics; but the war intervened, and psychophysics is now temporarily housed in some of the rooms intended for *Völkerpsychologie*. The three-fold Institute is therefore not yet complete, though it is all laid out and, apparently, promised; and if Wundt did not live to see his early dreams come fully true, we must remember that the scale of actual accomplishment far exceeds anything that he could have hoped for; the half has again proved to be greater than the whole.

In thus restricting myself to biography and to notes on Wundt's principal psychological books, I have left out of account what to most readers will be the really interesting parts of his last work. Beside the scientific homilies to which I have referred we have vivid sketches of men and their manners, of universities and cities; pregnant essays upon certain large questions of education; and a final section on the practical ethics of the Great War. Wundt is animated by a fervid and somewhat narrow patriotism. It is a thousand pities that he never visited England or America; the Anglo-Saxon genius is as foreign to him as it was familiar to Helmholtz, and he writes of the two countries with all the assured superficiality of the outsider who has facts but no perspective. His attitude to the future of Germany is that of chastened but convinced optimism. The *Volk* has been purged in three fires: the Reformation, the Thirty Years' War, and the Great War. It must and will, after the throes of present revolution, return to its native idealism and on that basis reconstitute the German State, which

will then play its due part in the furtherance of civilization.—But this and many other passages of *Erlebtes und Erkanntes* demand fuller consideration than is allowed by the limits, however generously drawn, of a book-review.

Fuller consideration of the book as a whole, taken together with many other books, is also needed before *der innere Zusammenhang* of Wundt's life, which his preface leaves us to make out for ourselves, can be brought into clear light. We see that he was one of those not uncommon natures that combine a large capacity for day-dreaming with an obstinate persistence in the day's work. We see that he had a steady dislike of routine imposed from without, though he presently laid a scholar's regimen upon himself; he shrank from the life of a schoolmaster or medical practitioner; he escaped to Tübingen and clung to Heidelberg that he might work and play at his own sweet will. We see that his endowment was general and not special; with better schooling, he might have become a philologist; as it was, he might have been a chemist or a professor of pathological anatomy, or might have remained a physiologist and attained to eminence in that field; and if he was not in fact a politician, he would have made a very good minister in a bureaucratic government. Apart from these generalities three things, in particular, have impressed themselves on me as I have read. The first is Wundt's quite unusual combination of the experimentalist with the generalizing logician. Few men of science, even great men, hold the balance of interest as truly as Wundt held it. The second thing is his extraordinary power of 'cram.' He could keep available an extended and intricate subject-matter for as long as he needed it, and could then drop it, and turn fresh to a new topic. I know no better word than 'cram' to use for this capacity, but it was cram carried to the *n*th degree. The third thing—a character that I have called attention to in my biographical paper—is Wundt's imperative tendency to systematize the unripe. He was not a systematist of pure blood; for that, his thinking (if I may say so with all respect) was too turbid, too little clear; neither, of course, was he the mere encyclopaedist; he was continually essaying system. All these points are illustrated in his sixty years of psychologizing. They do not account for the psychological trend: if we are ever to understand that, we must know more of *Angelegtes*, and relate it both to *Erlebtes* and to *Erkanntes*.

E. B. T.

L'année psychologique, vingt et unième année (1914-1919), ed. by H. Piéron. Paris, Masson et Cie., 1920, pp. xii, 522. Price 35 fr.

Psychology welcomes the reappearance of *L'année psychologique*. Founded in 1894 by Alfred Binet, it appeared regularly every year until the 20th volume had been published in 1914. Then the war intervened, and for the next six years publication ceased. Now it appears once more as a sign that French psychologists are again at their habitual work. The '*Année*,' as it is familiarly called, has from the first occupied an unique place among psychological periodicals. It was designed, as its title implies, principally as a year-book of psychology. It was the founder's original plan to divide the book into three parts: the first to contain original articles, essays and experimental investigations (chiefly from the laboratory of the Sorbonne), and general reviews of important topics written by experts in their special fields; the second to consist of digests of all the significant books and monographs of psychological interest which had appeared during the year; and the third to be a psychological index for the year. With this